

Fig. 22

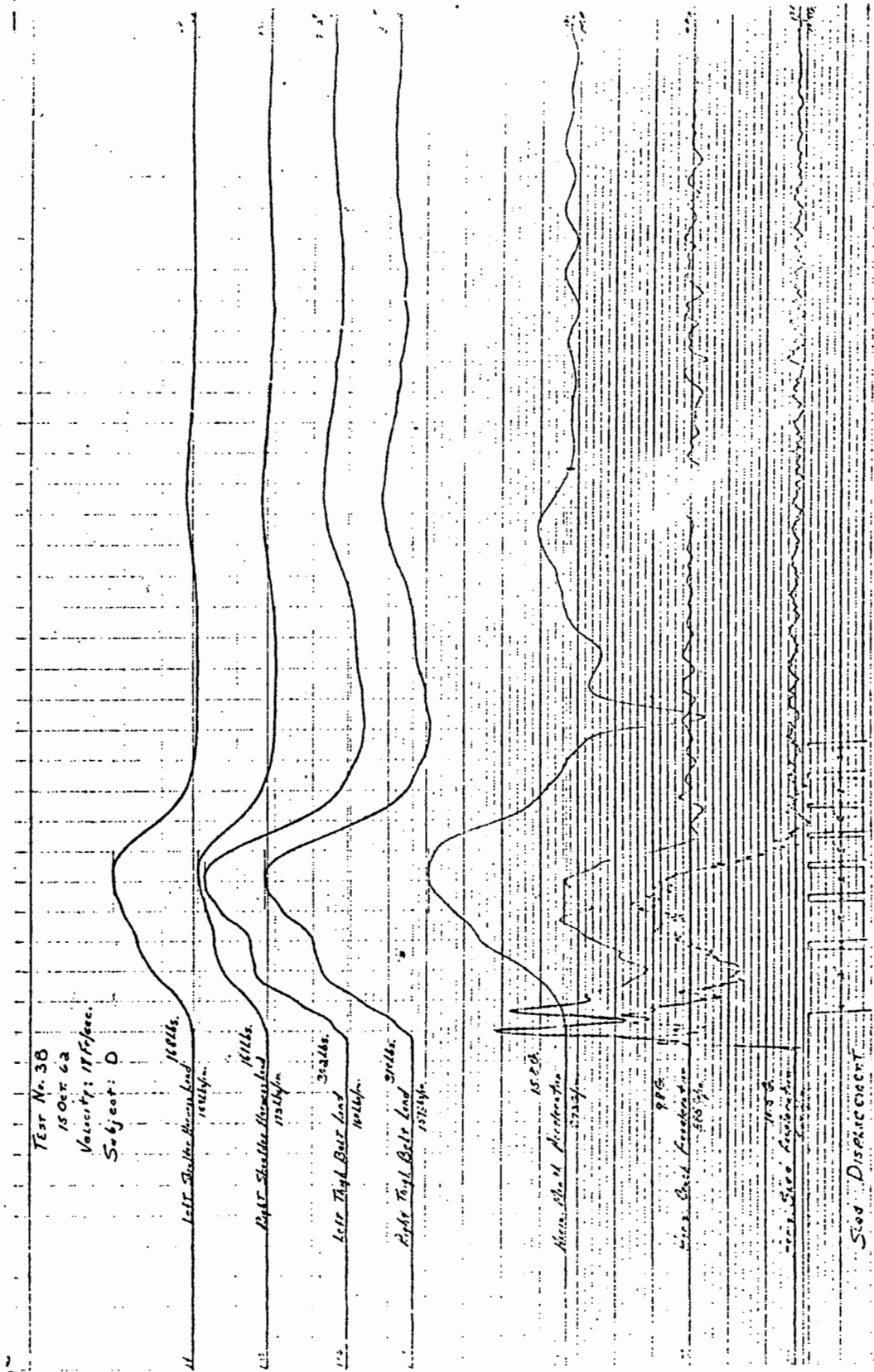


Fig. 23

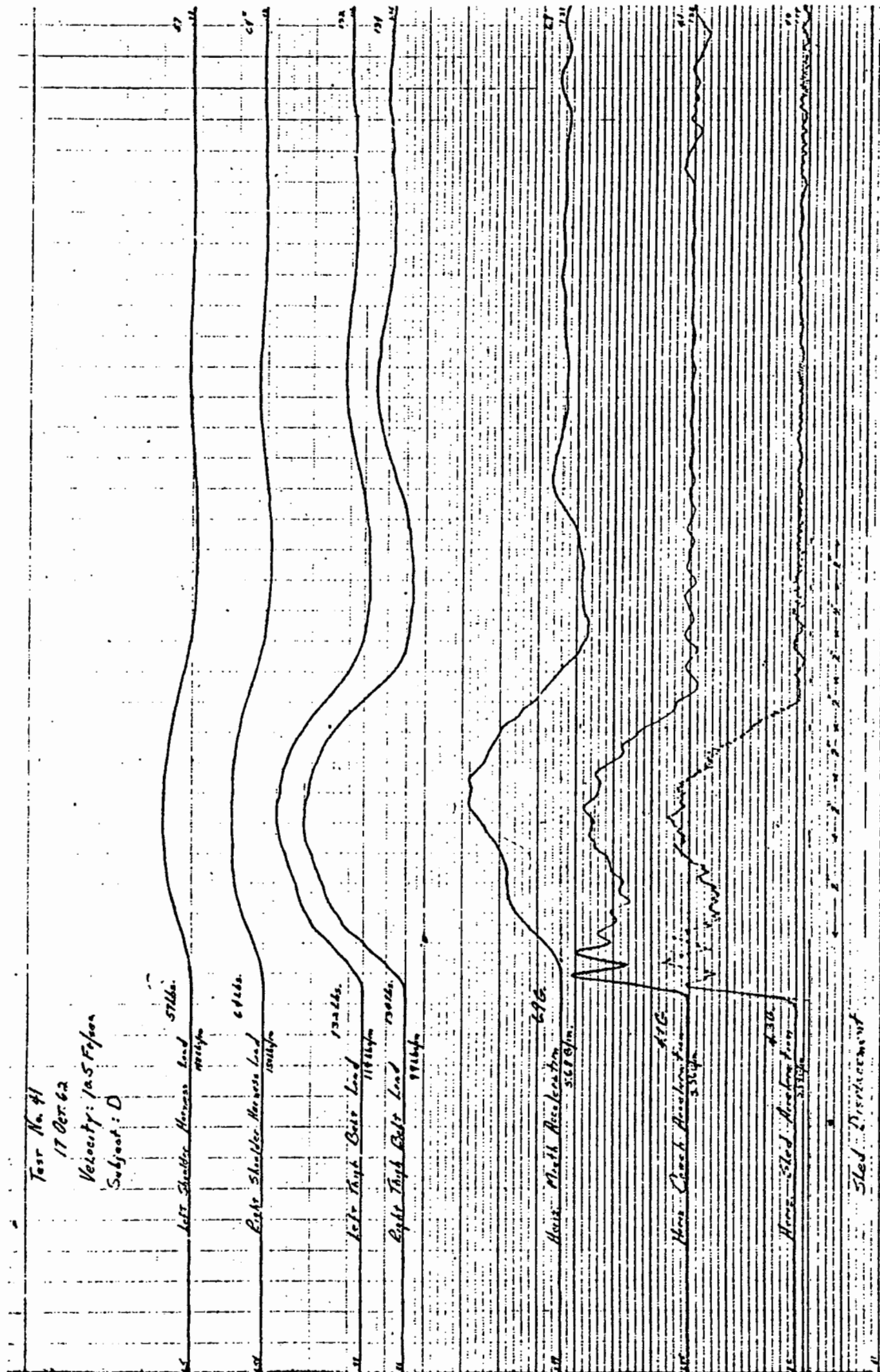


Fig. 24

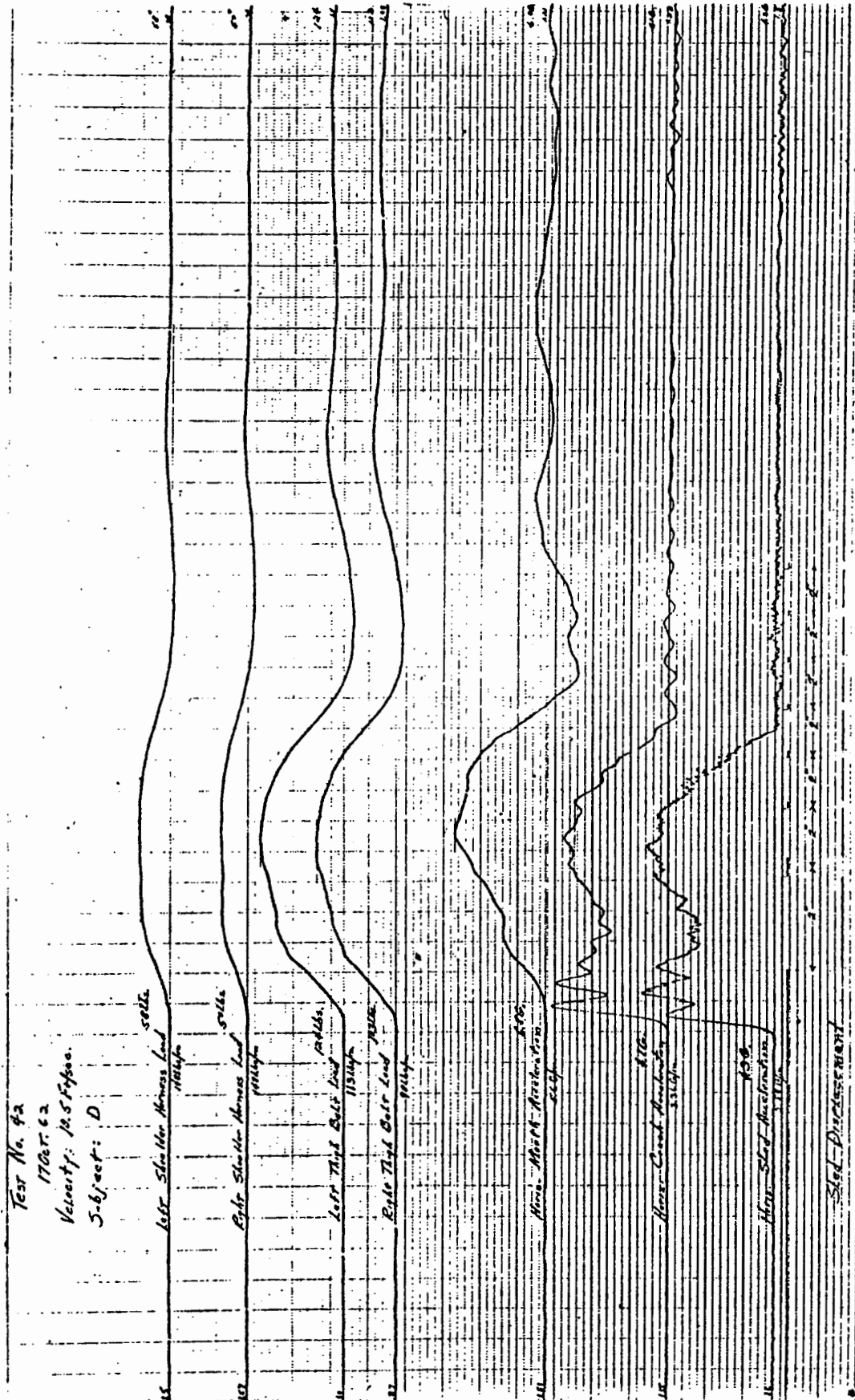


Fig. 25

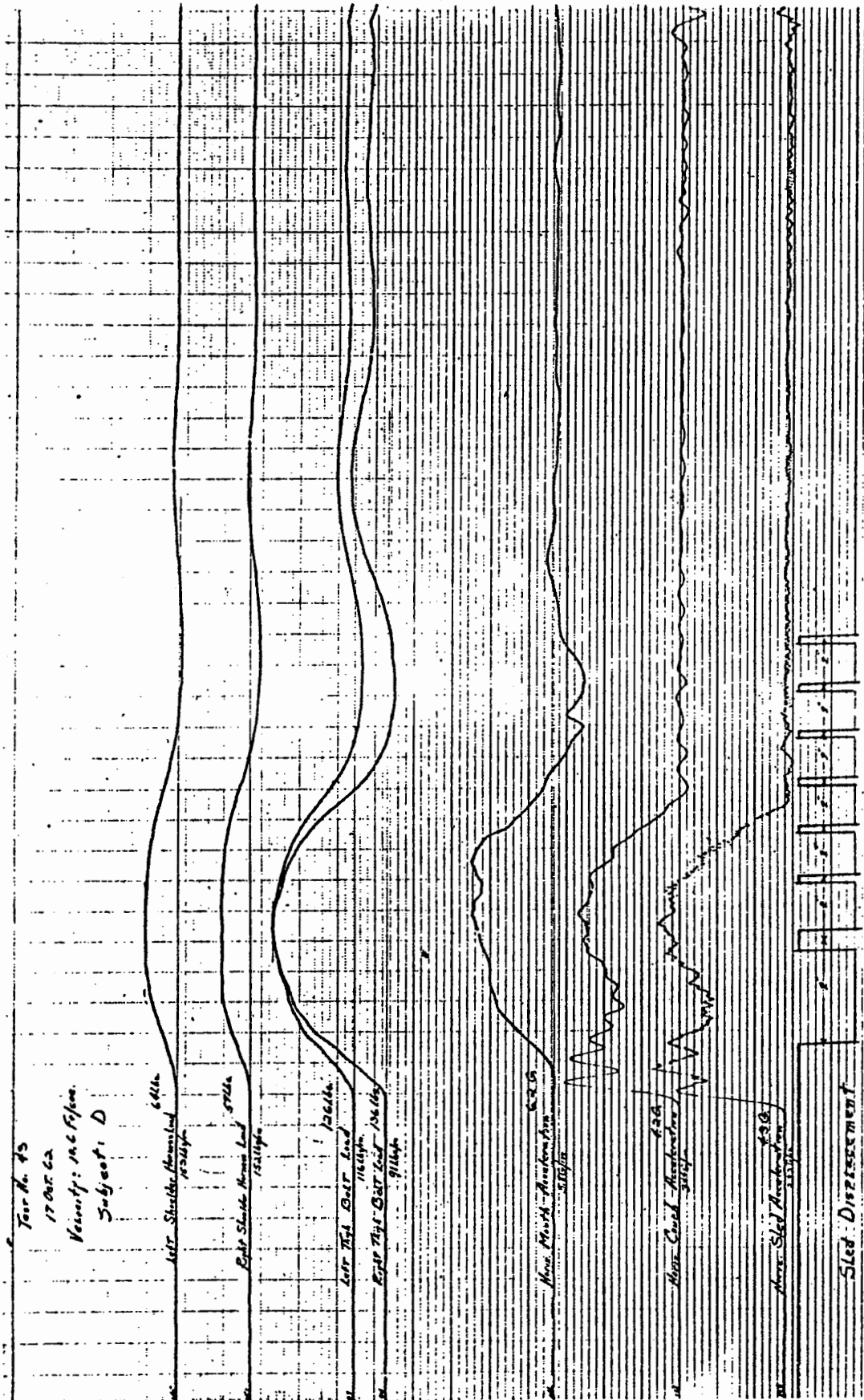


Fig. 26

Test No. 44

12-17-82

Subject: D

Velocity: 11.4 F/Sec

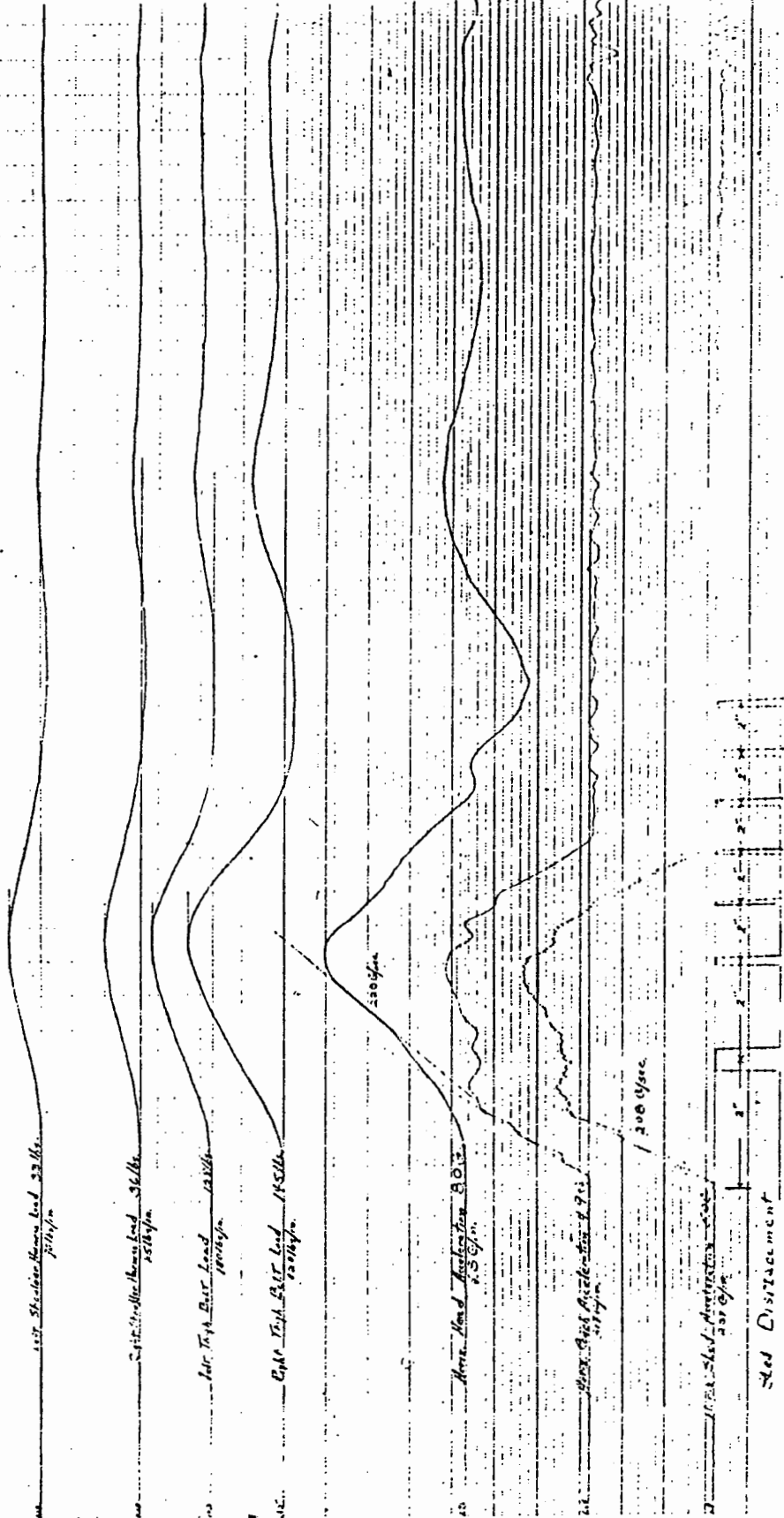


Fig. 27

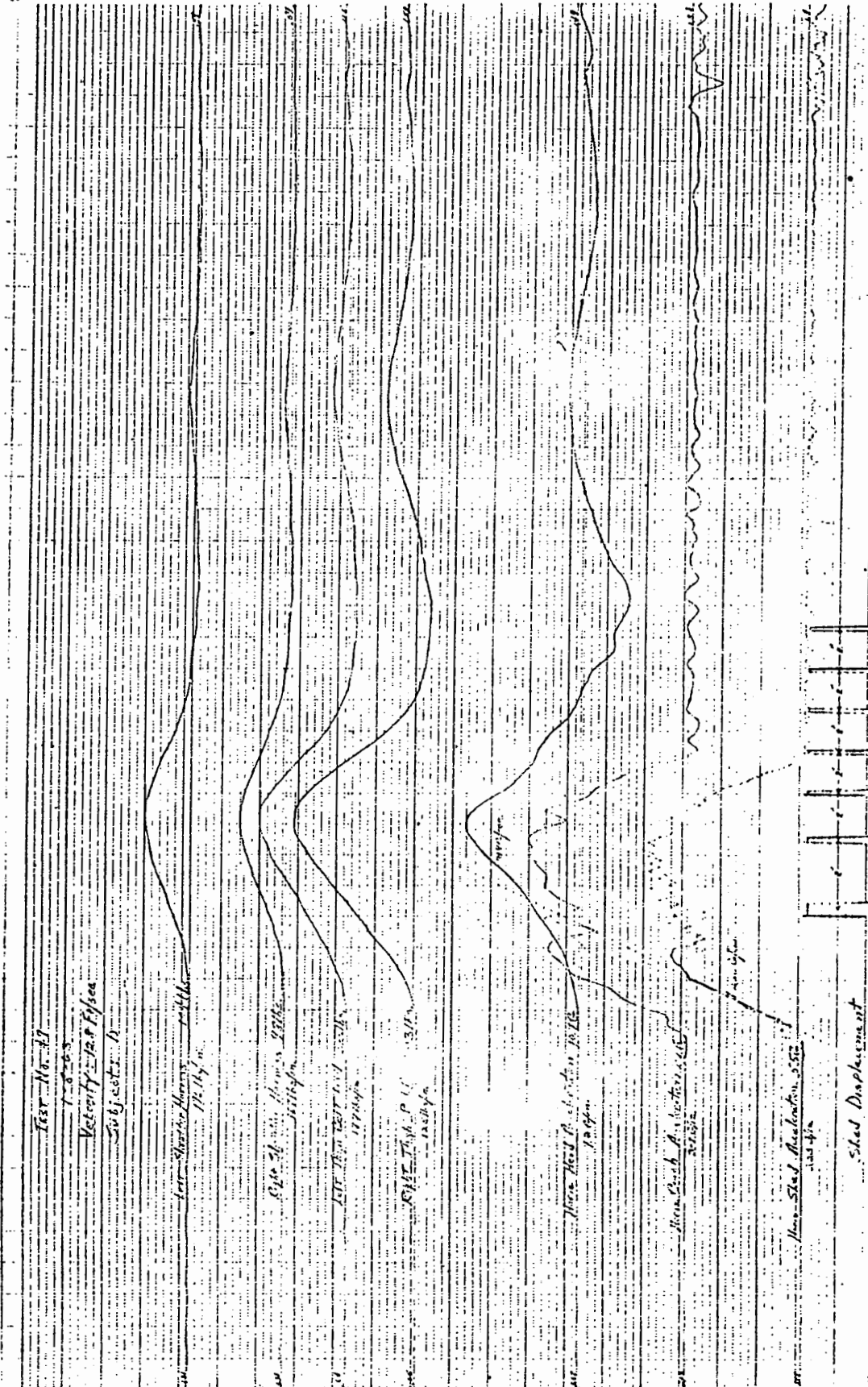


Fig. 28

Test No. 50

7-14-23

Duration: 156.4 sec.

Subject: D

Left Sled Shock Head 16.5 lbs

207 lbs

Right Sled Shock Head 27 lbs

172 lbs

Left Sled Base Load 23.5 lbs

184 lbs

Right Sled Base Load 27 lbs

131 lbs

Front Sled Shock Head 16.5 lbs

135 lbs

Front Sled Shock Head 23.5 lbs

132 lbs

Front Sled Shock Head 27 lbs

132 lbs

Sled Displacement



Fig. 29

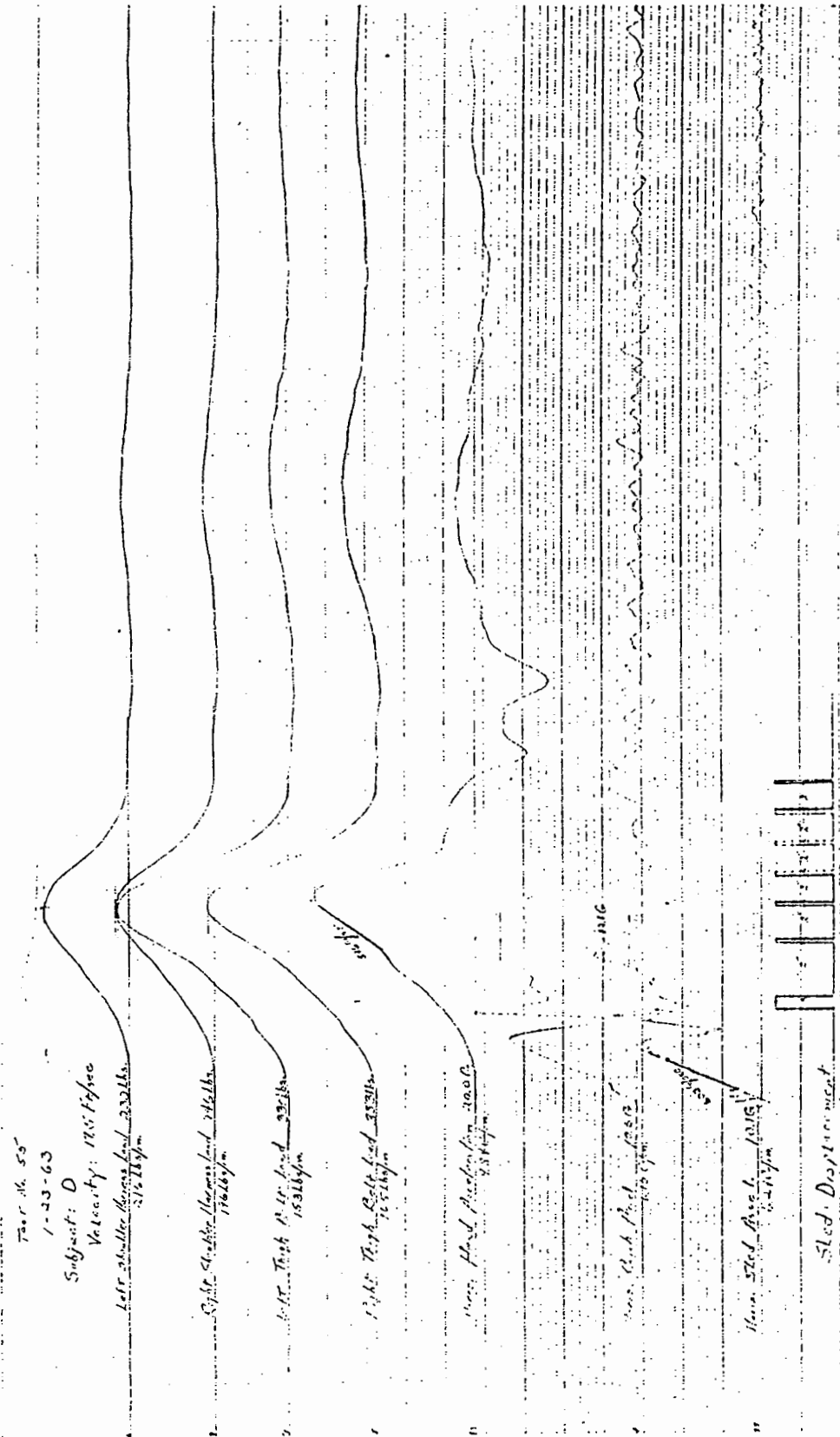
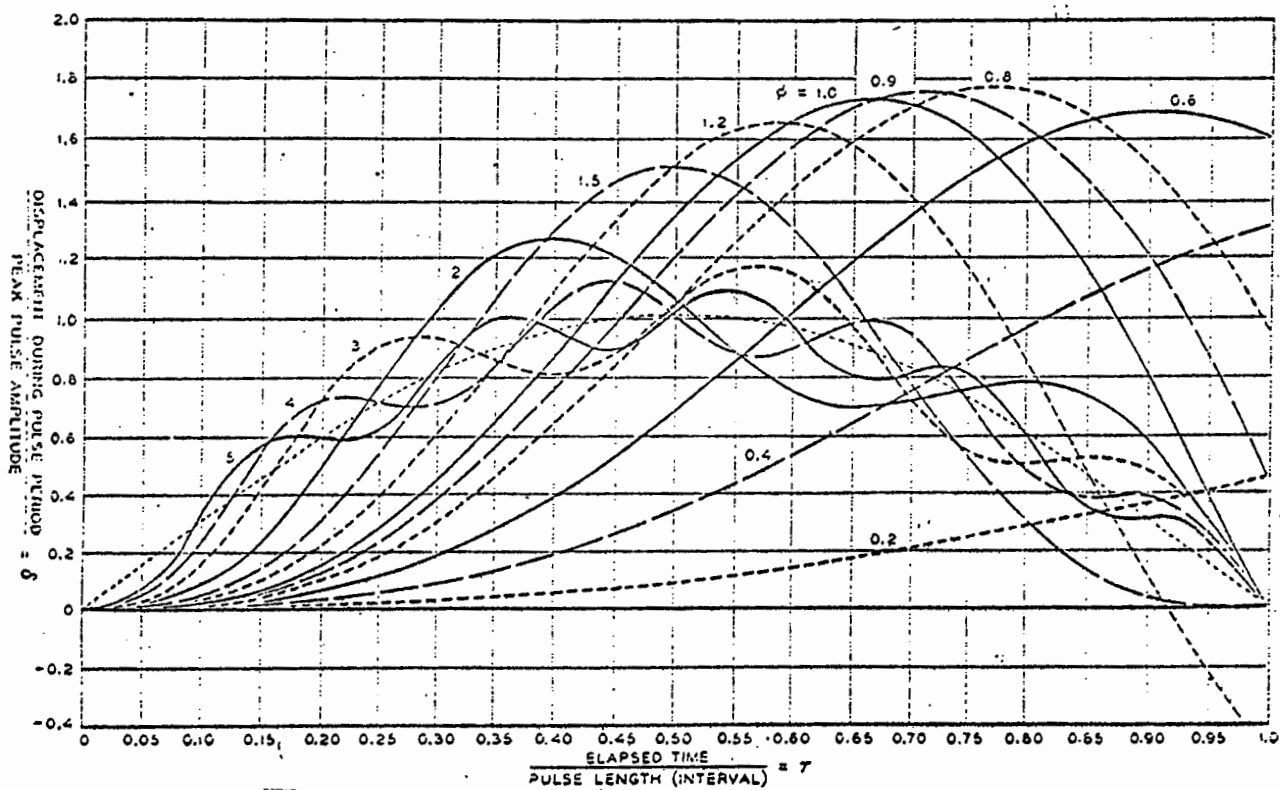


Fig. 30



—Transient time displacement curves for various values of ϕ sine whip.

Fig. 31

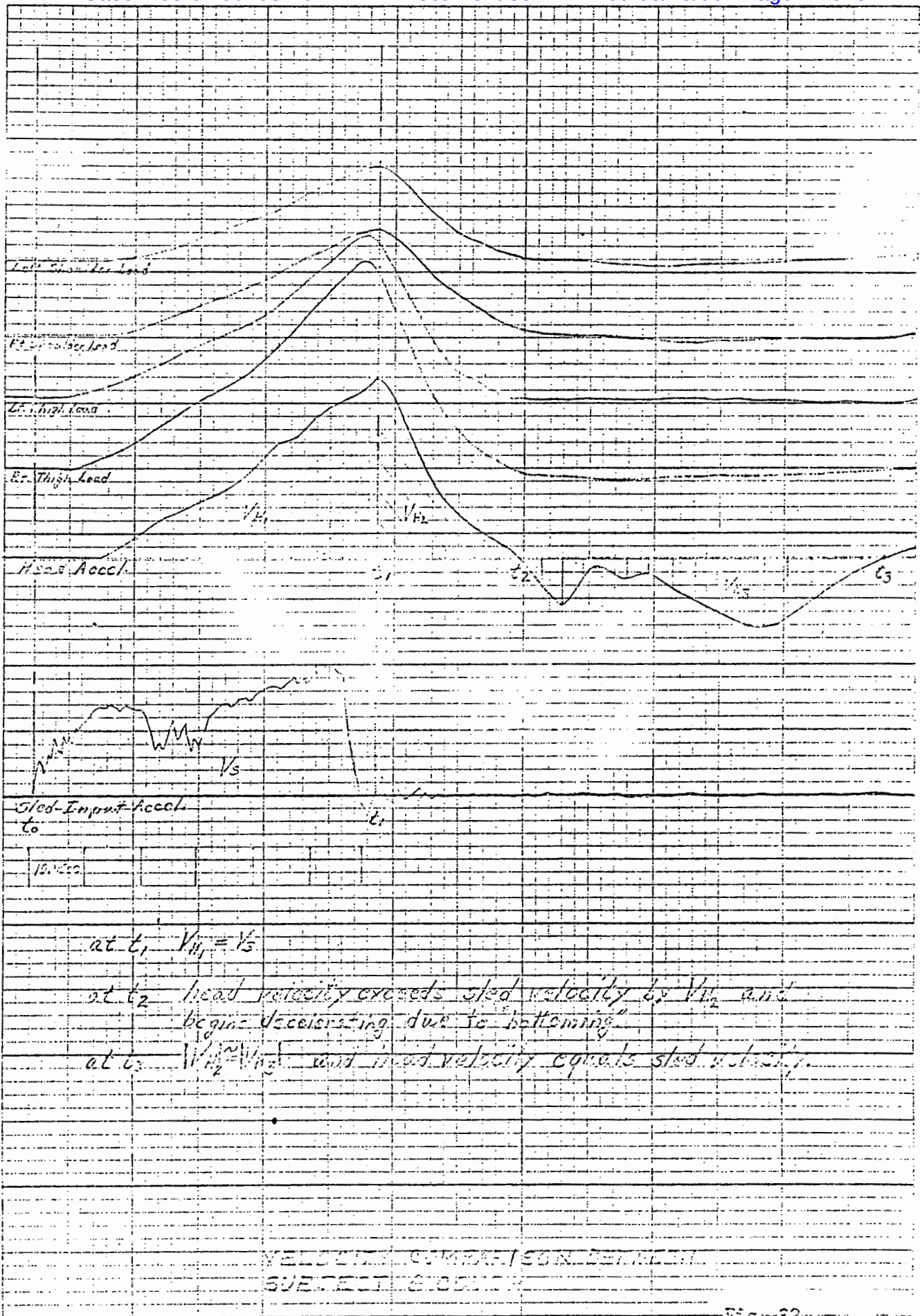
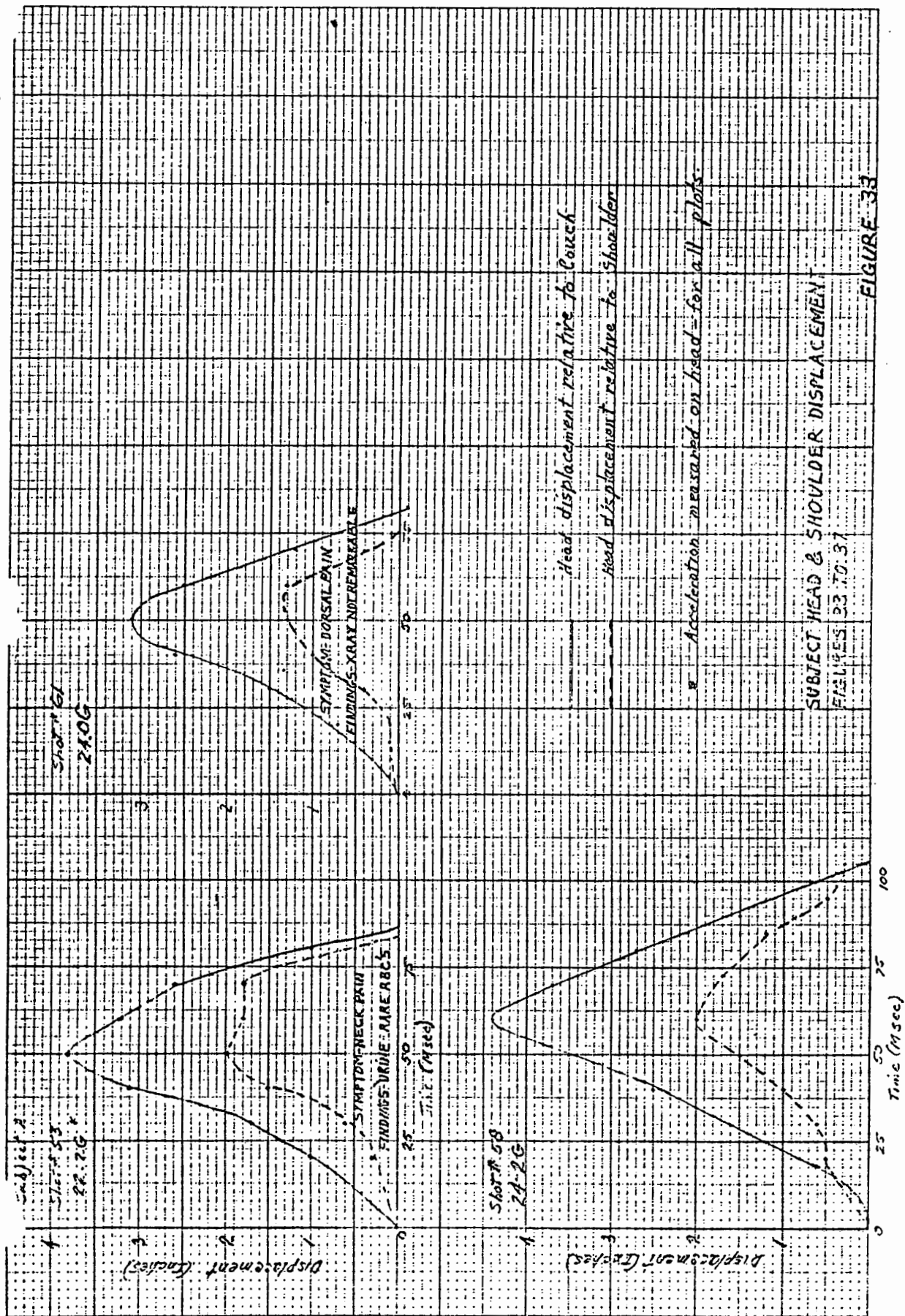


Fig. 32



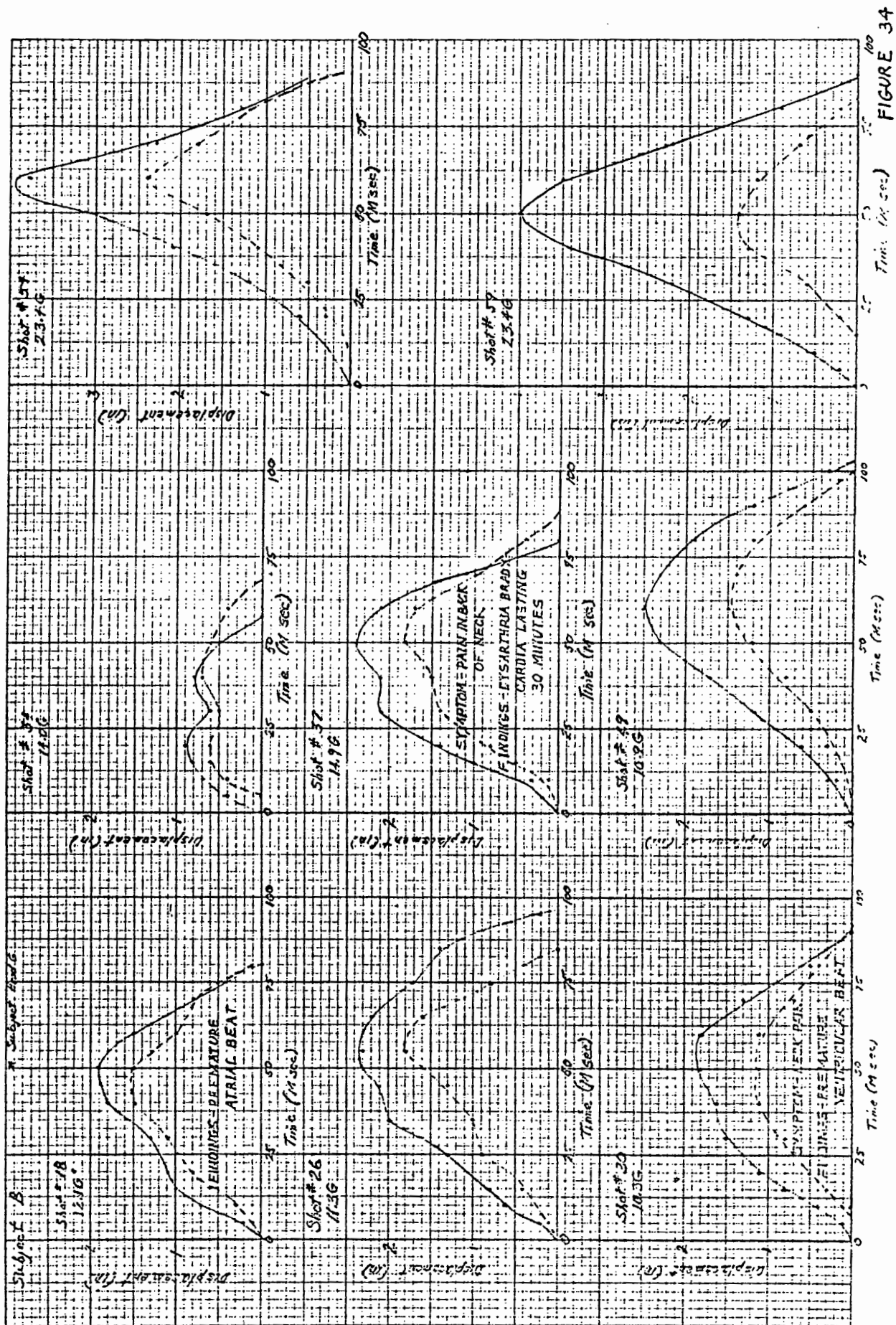


FIGURE 34

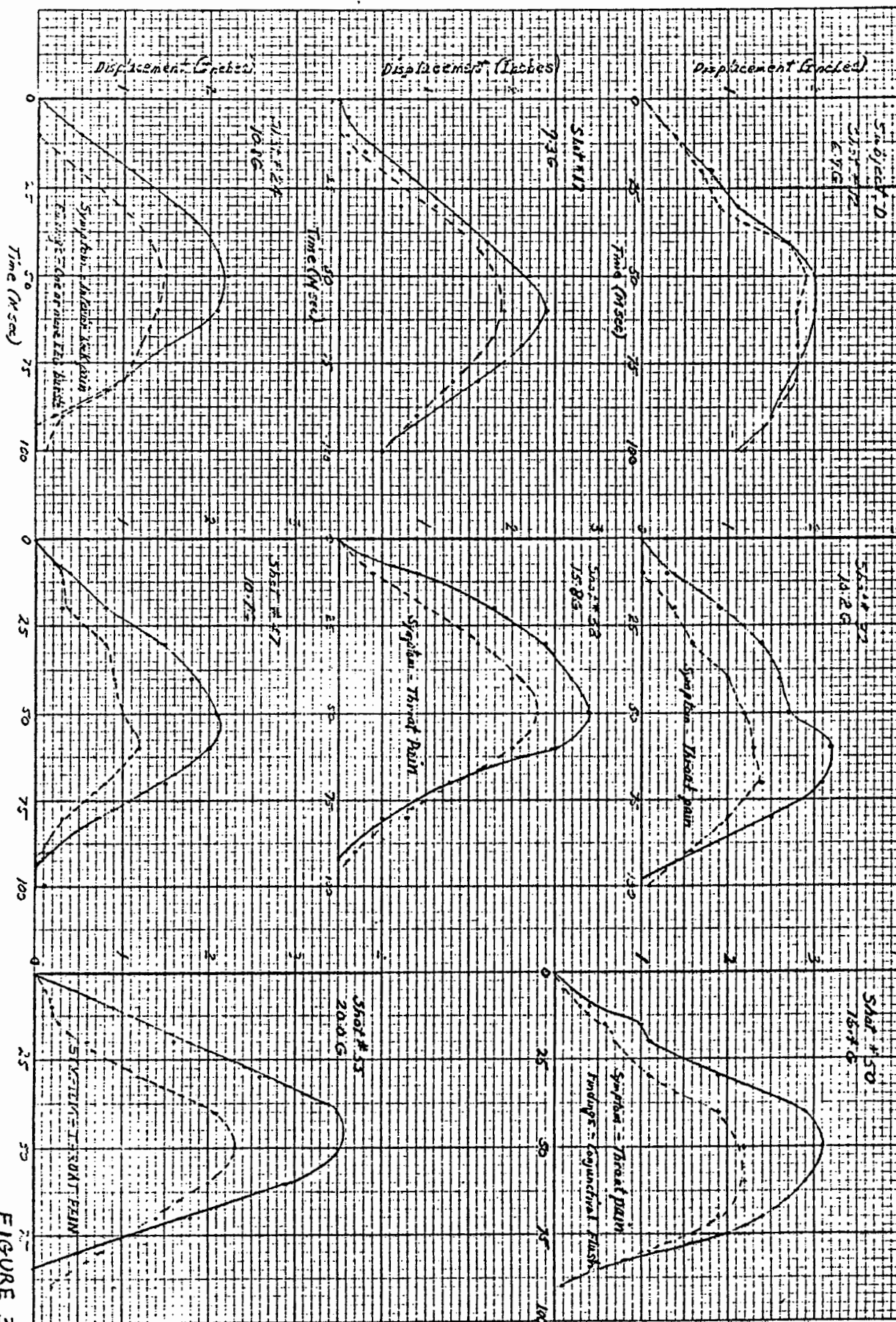
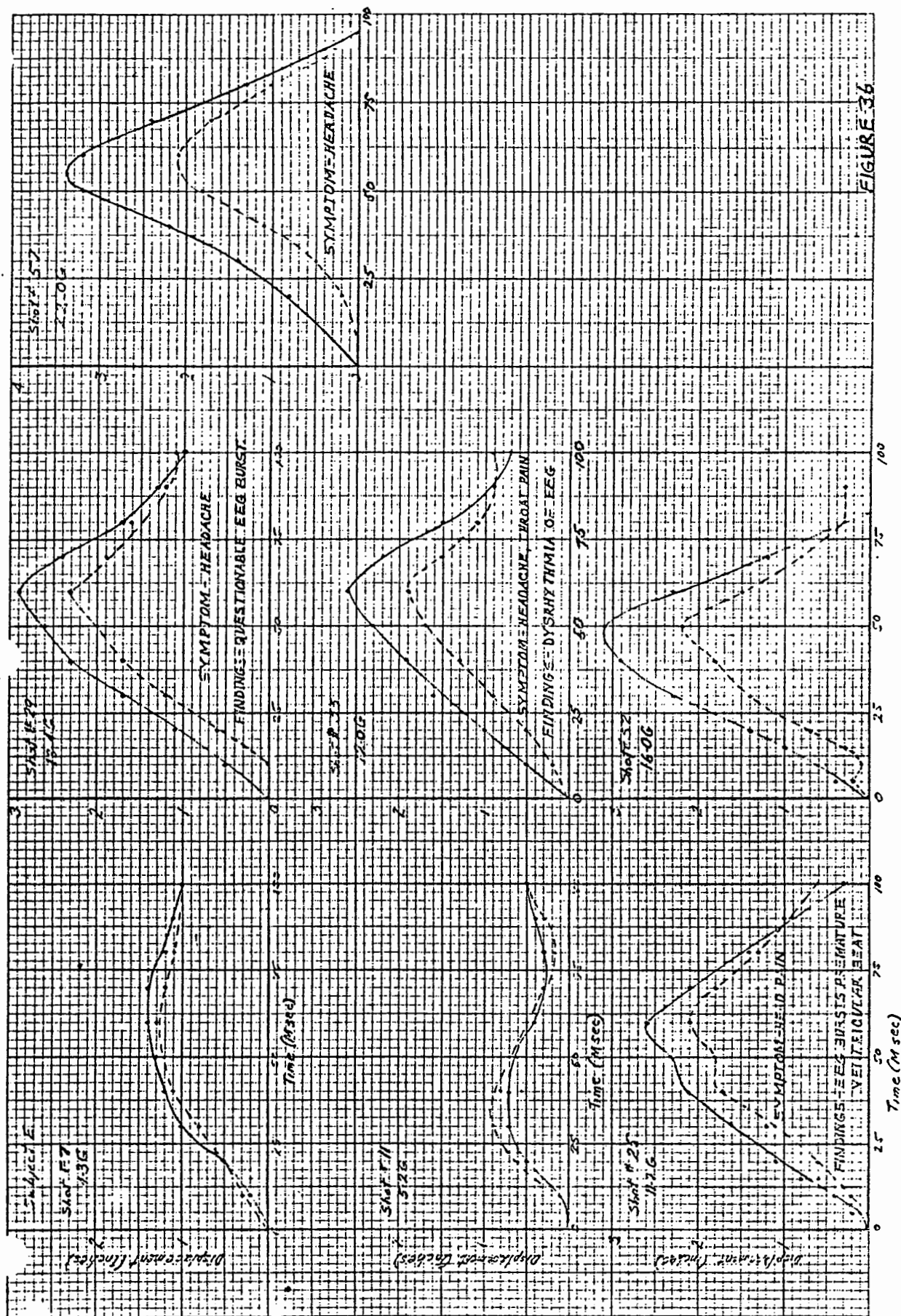


FIGURE 35



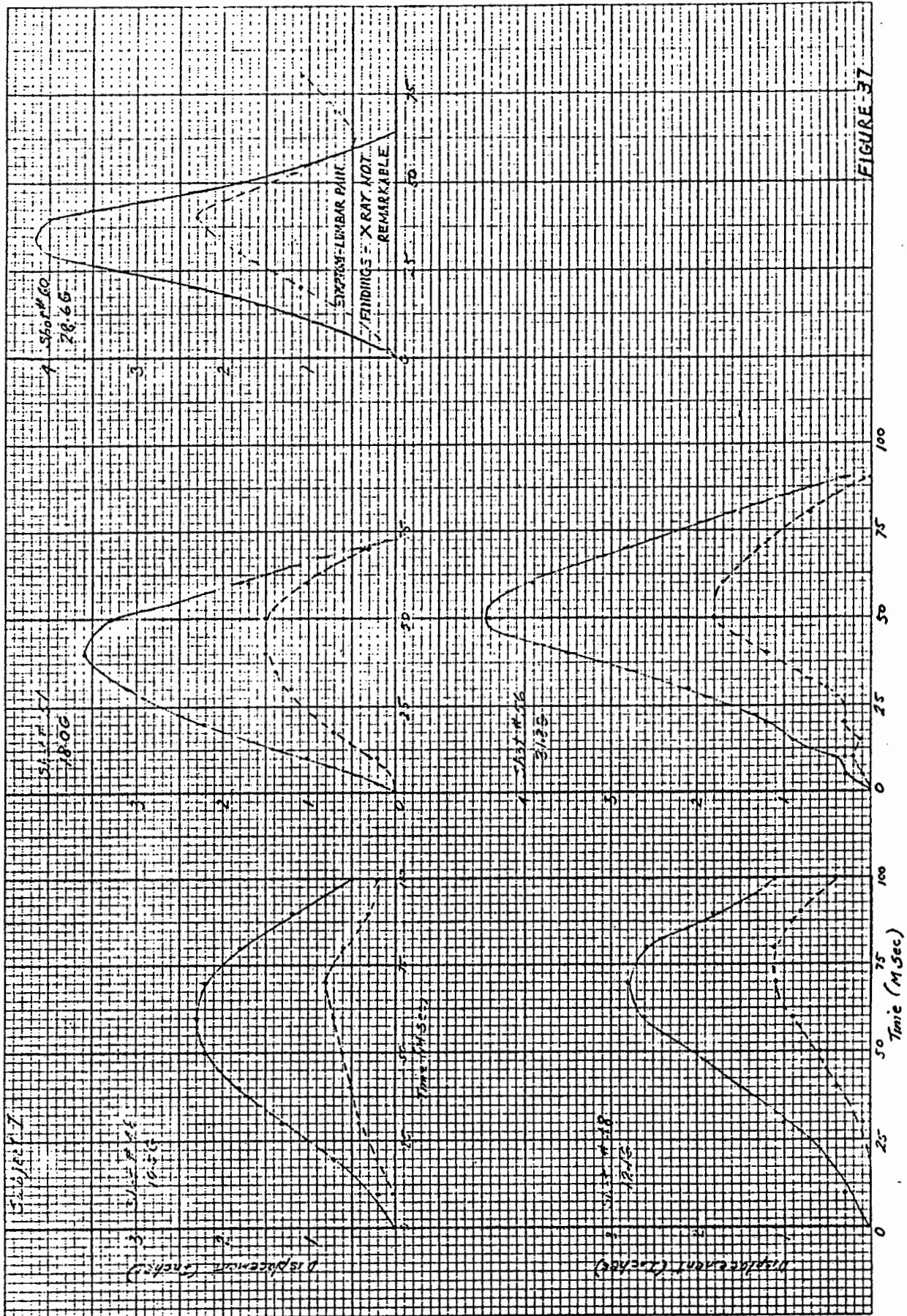


FIGURE 37

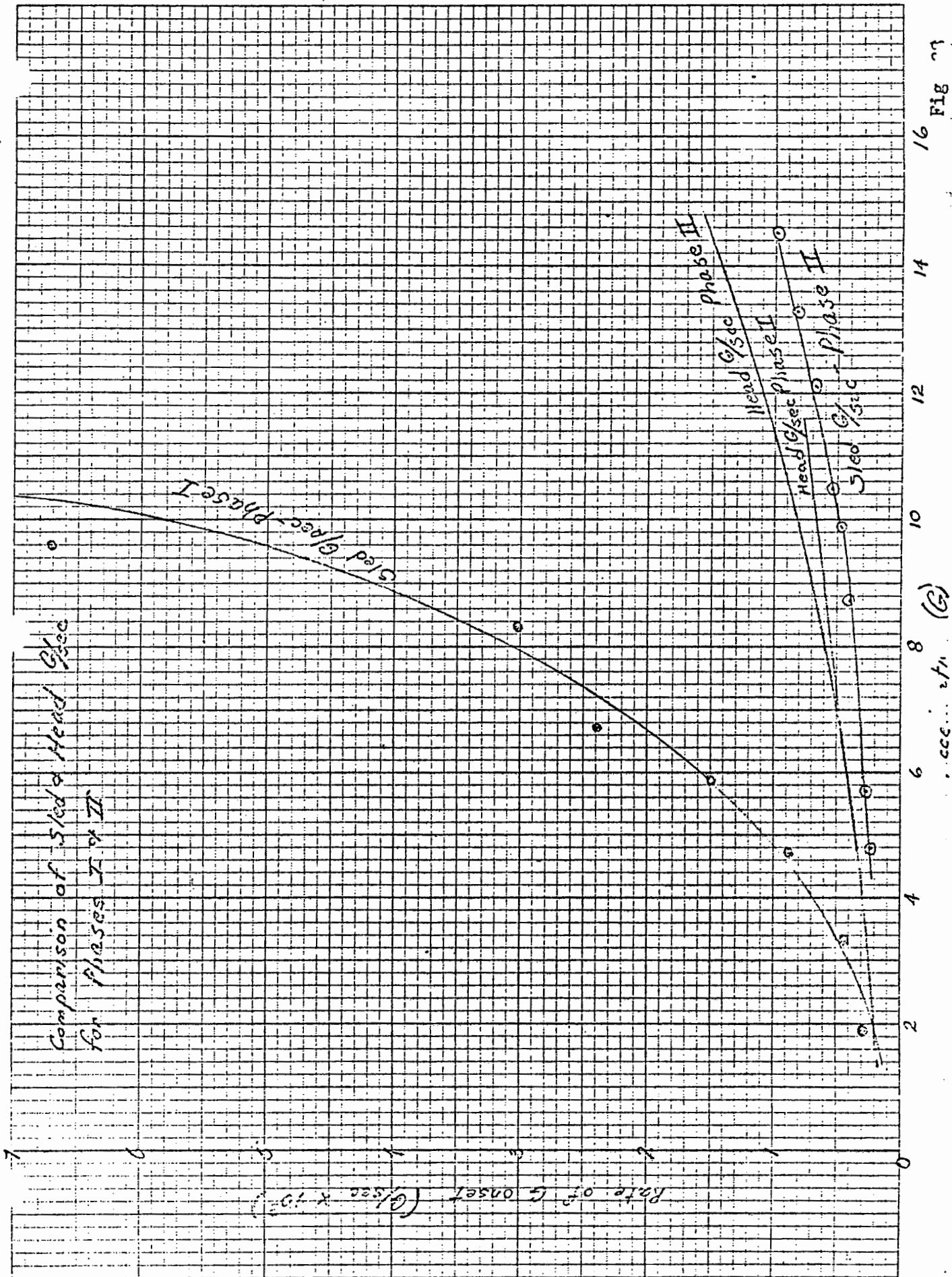


Fig 16

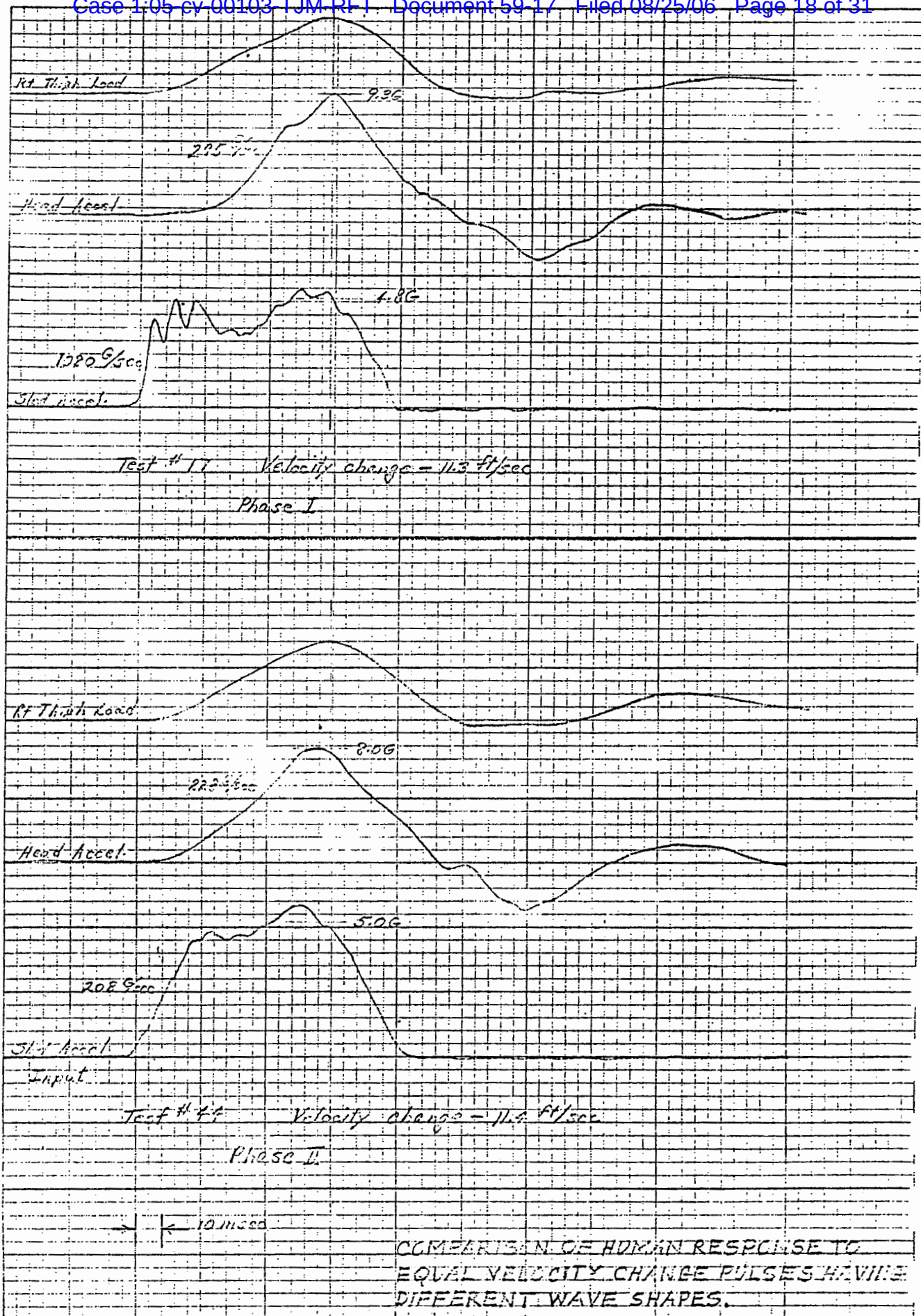


Fig. 39

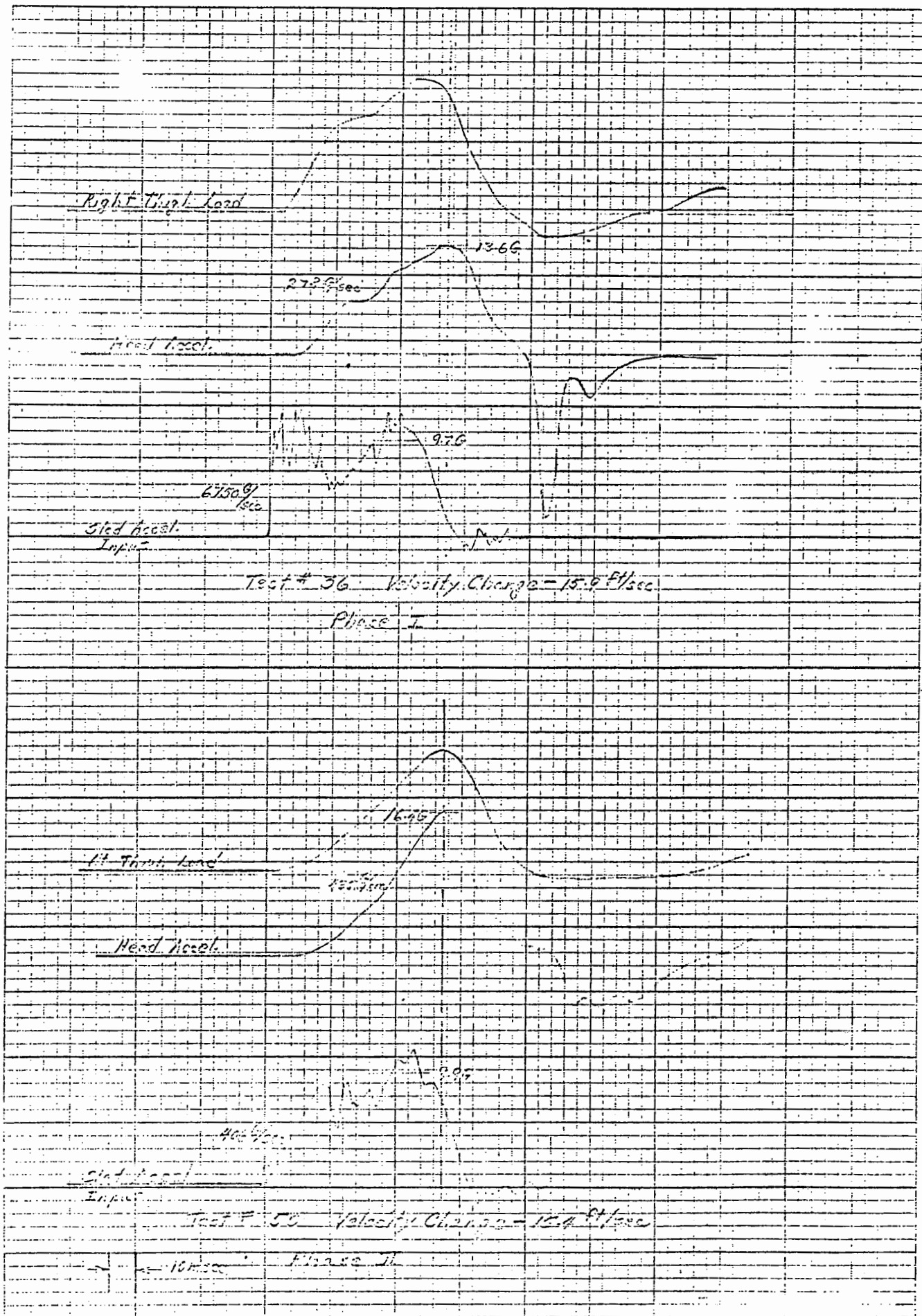


Fig. 40

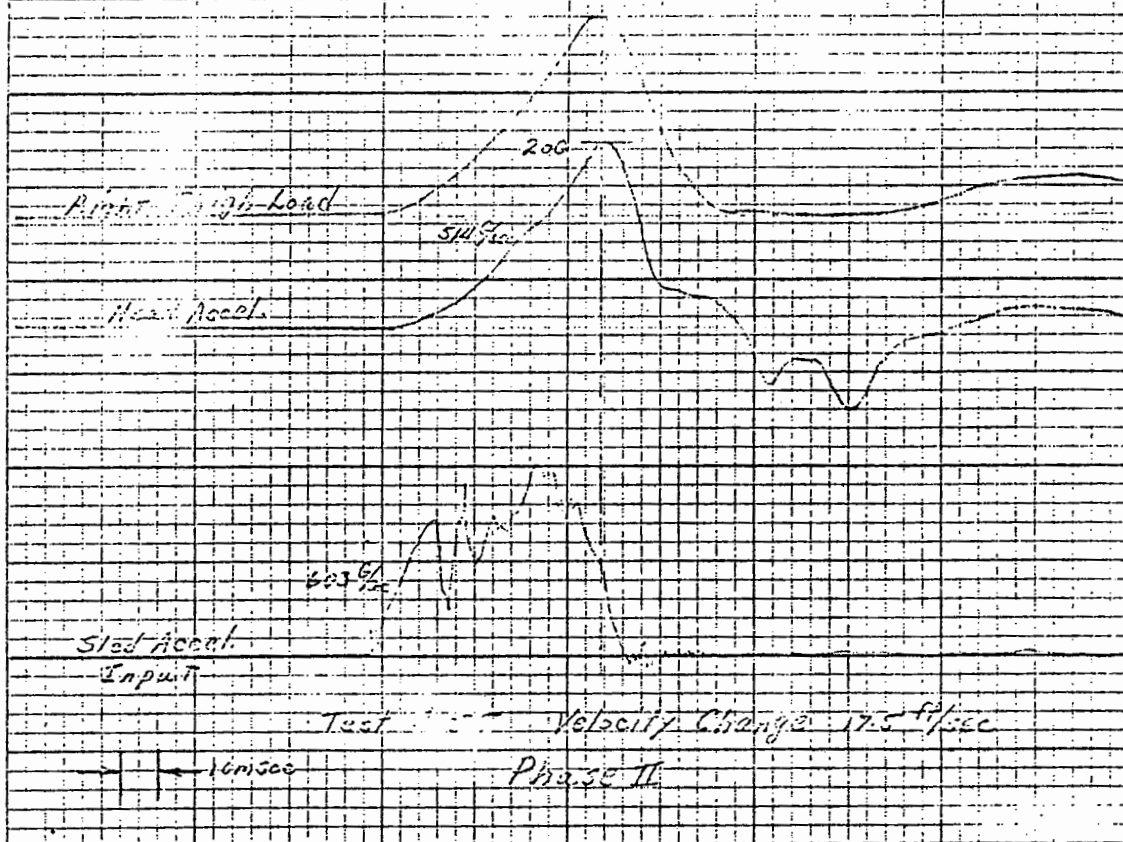
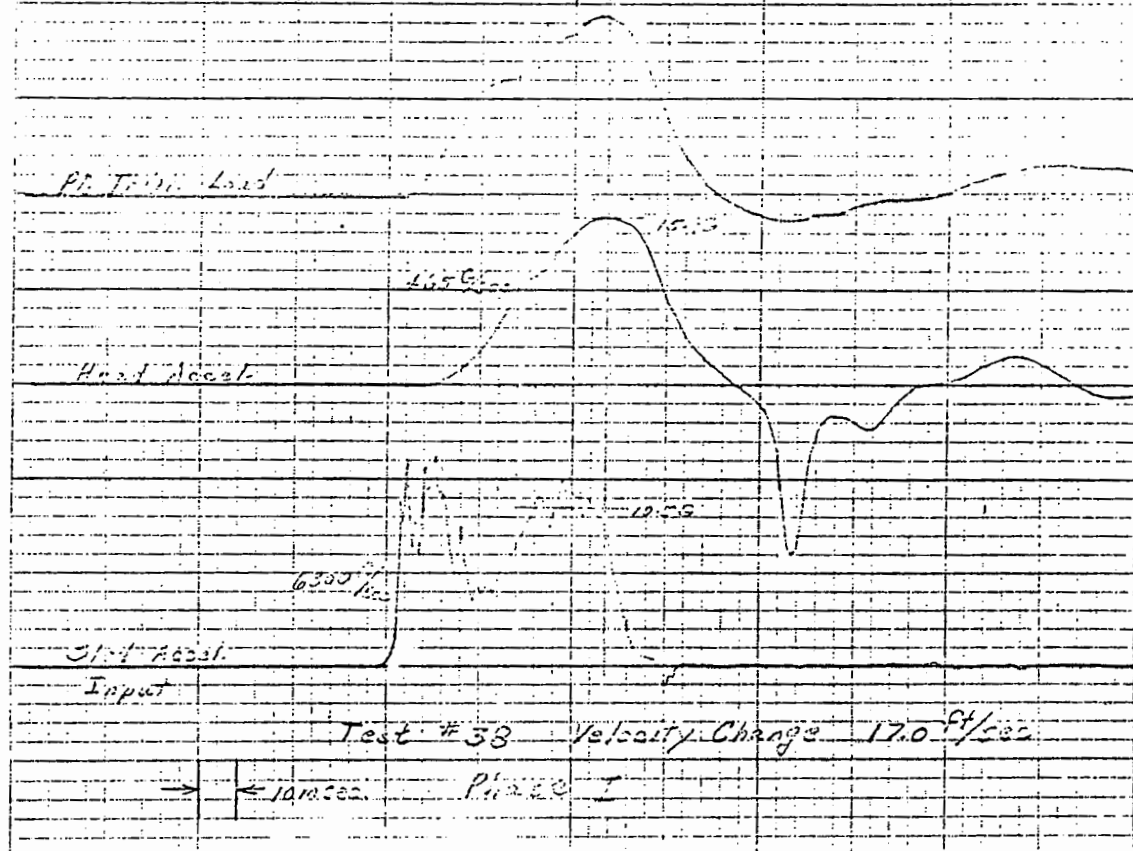
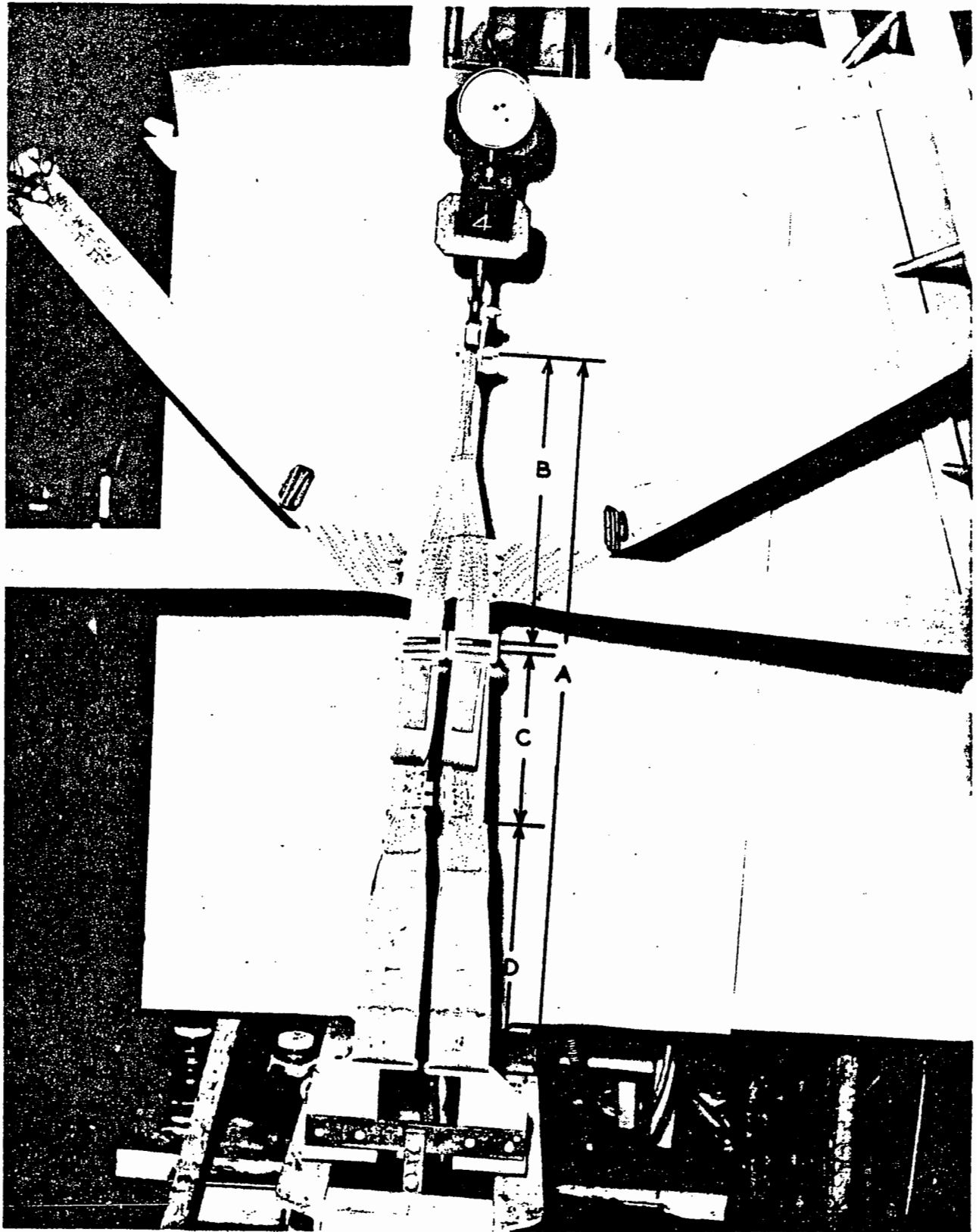


Fig. 41



SETUP FOR APPLYING STATIC LOADS TO HARNESS

PHOTO NO: CAN-353822 (L)-7-63

FIGURE 42

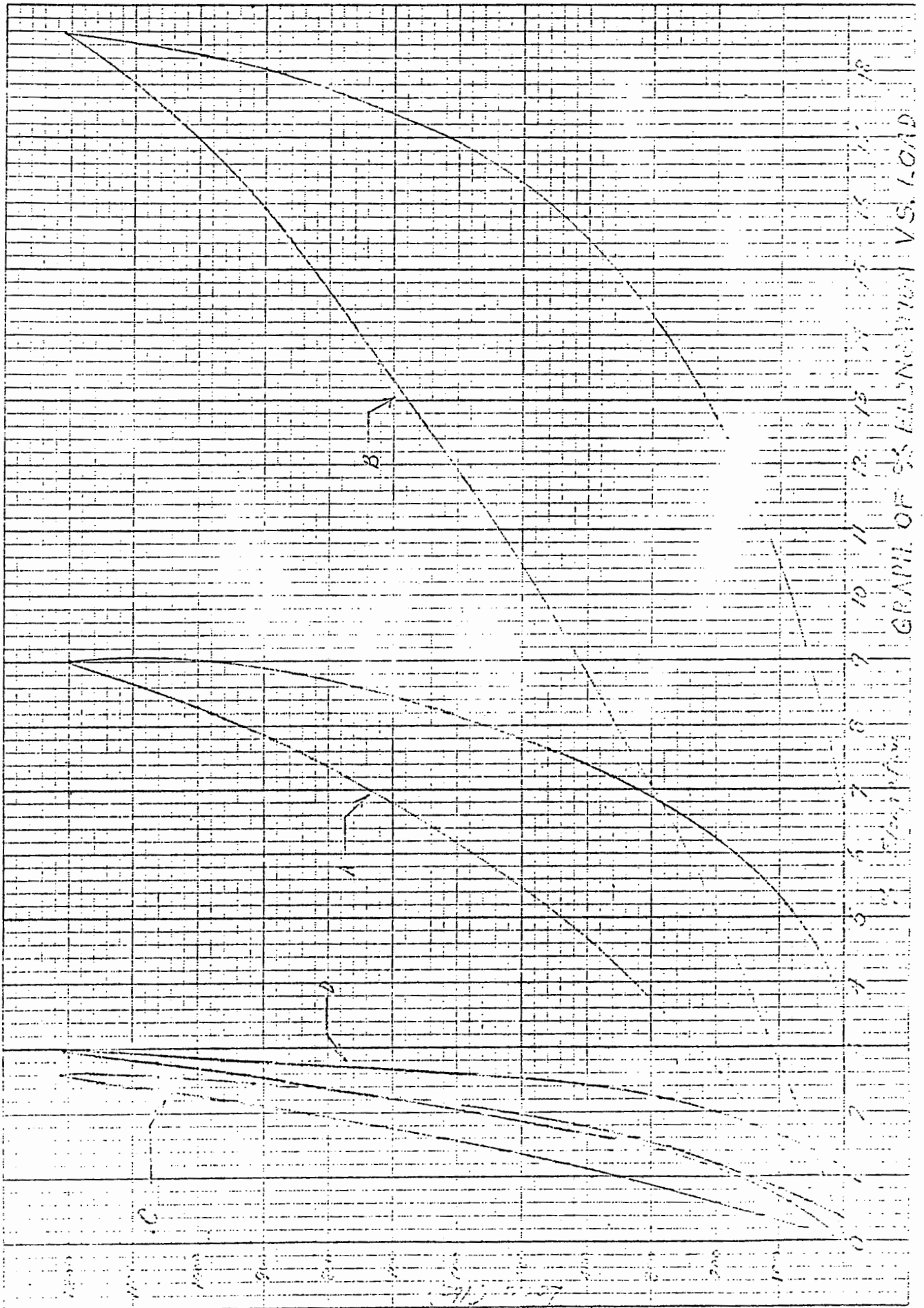
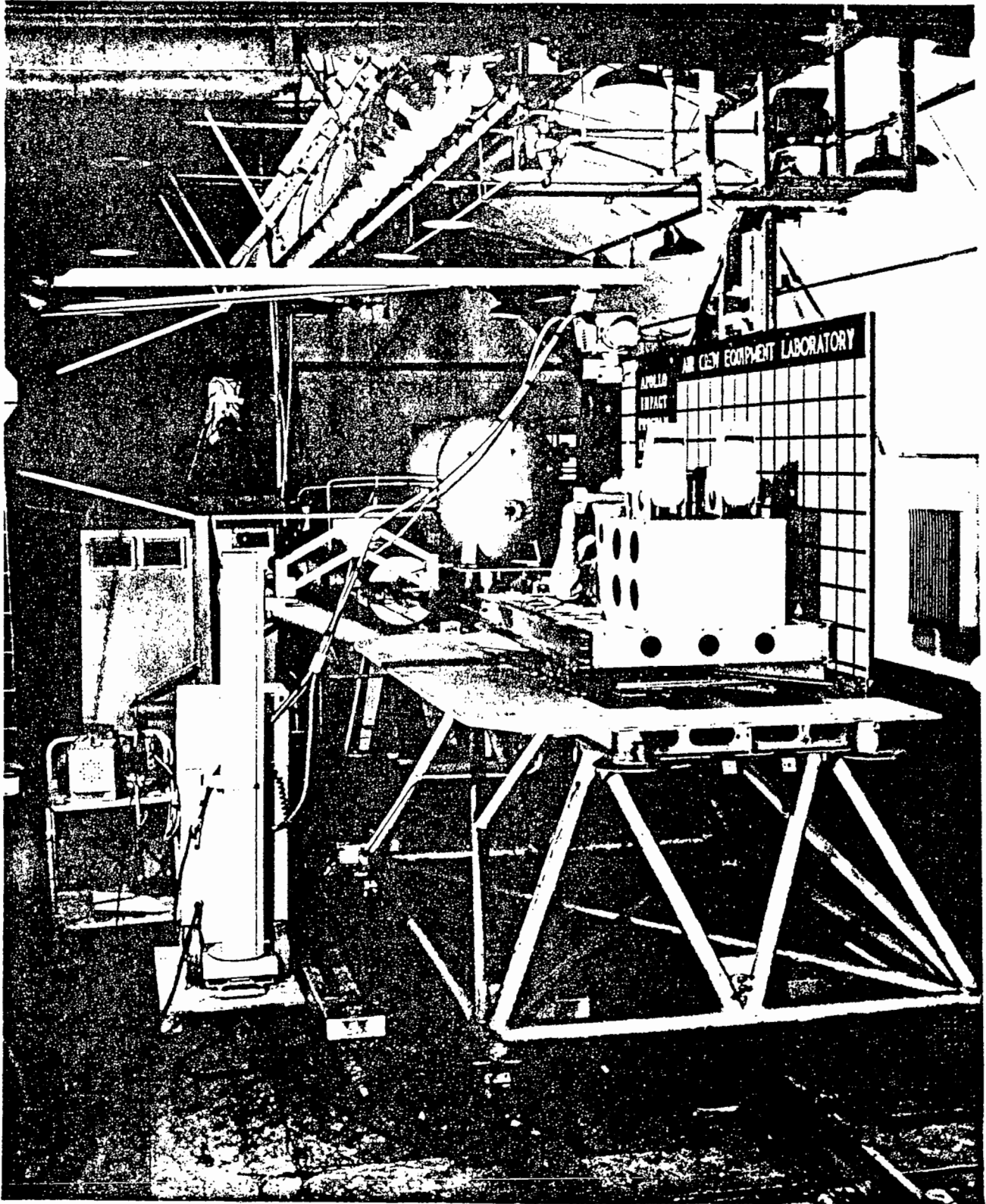


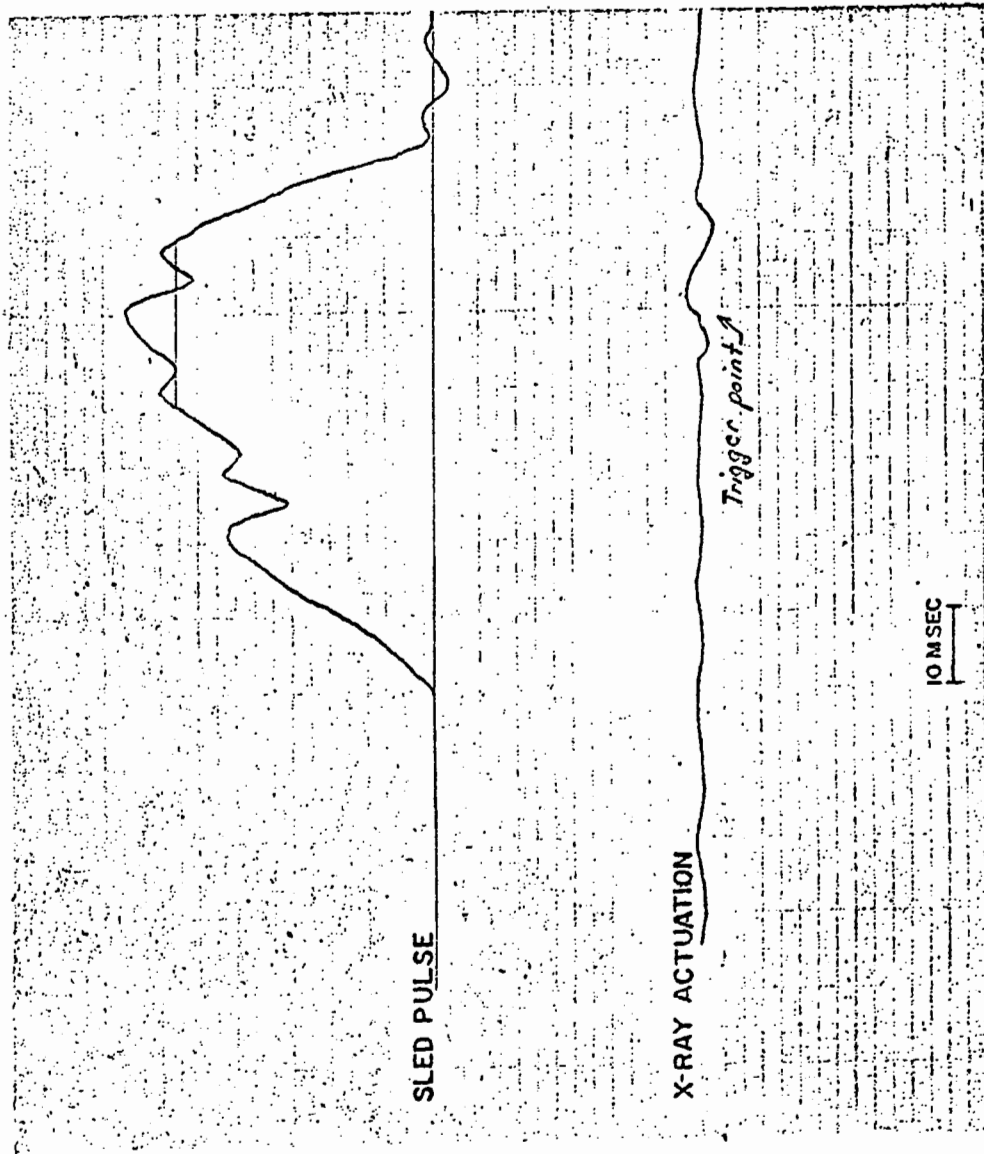
FIG. 13



X-RAY UNIT PLACED IN POSITION FOR OBTAINING A ROENTGENOGRAM
DURING FIRING #61

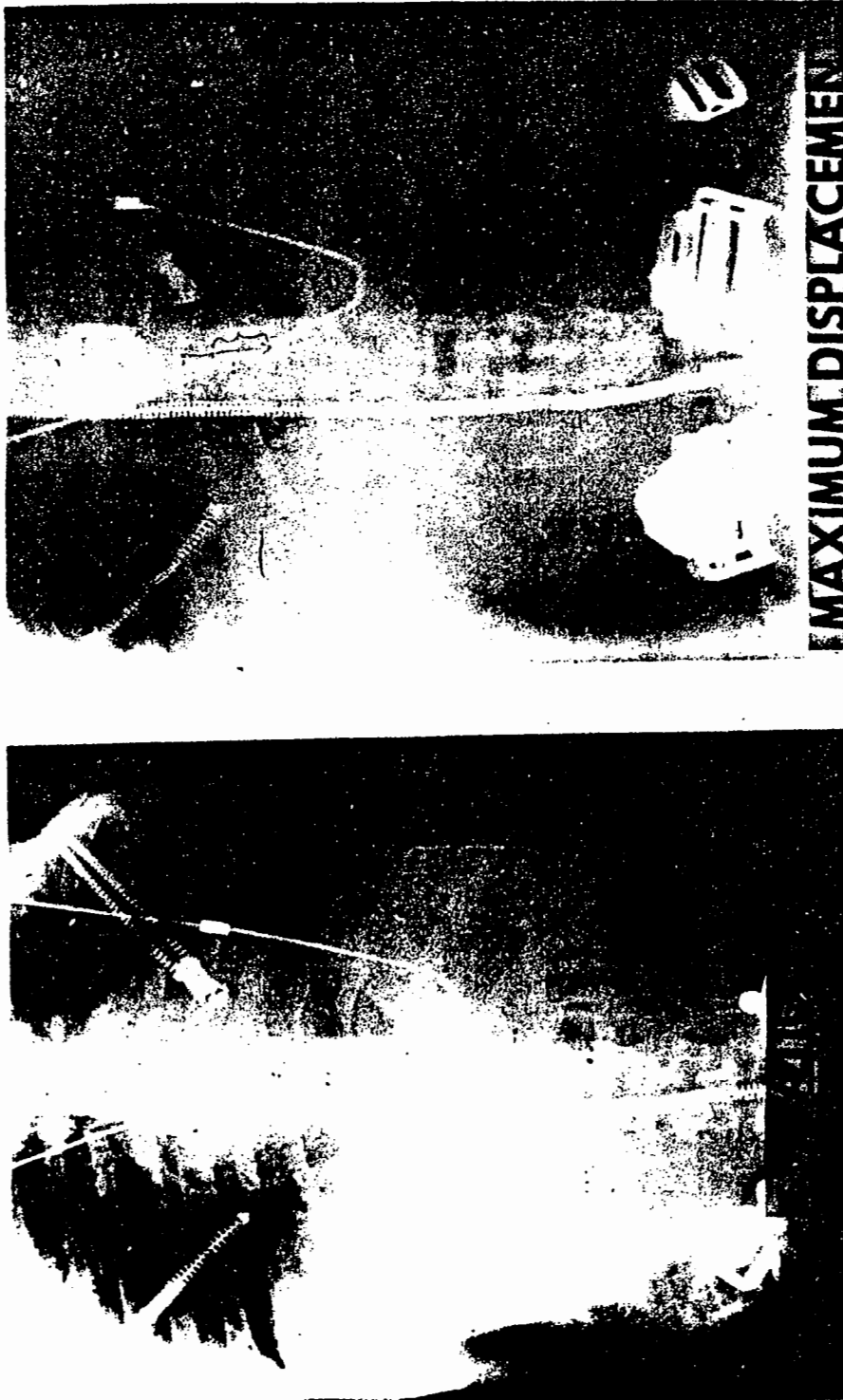
PHOTO NO: CAN-350838 (L)-3-63

FIGURE 44



TIME RELATION BETWEEN X-RAY ACTUATION
& SLED ACCELERATION PULSE

Fig. 45

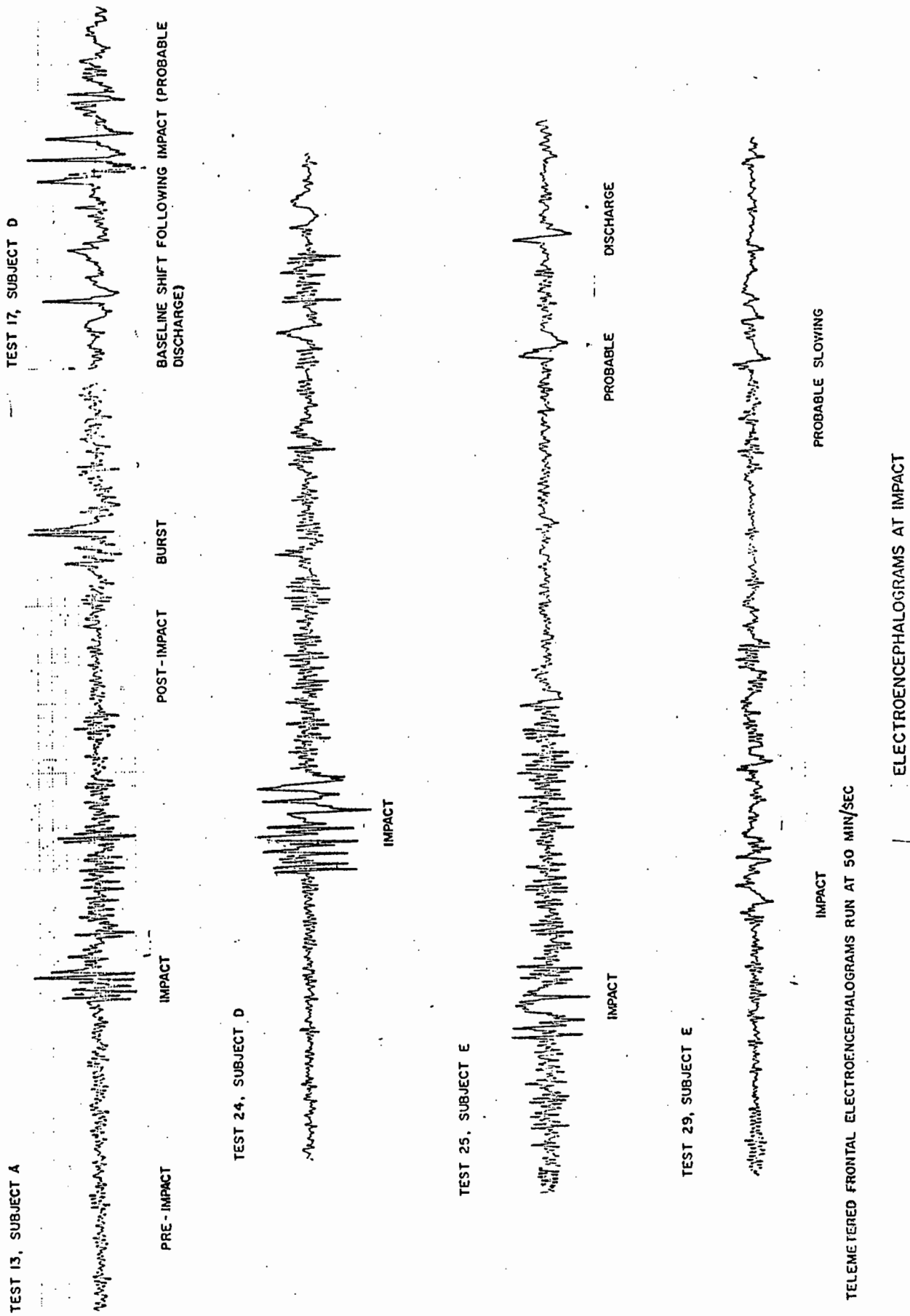


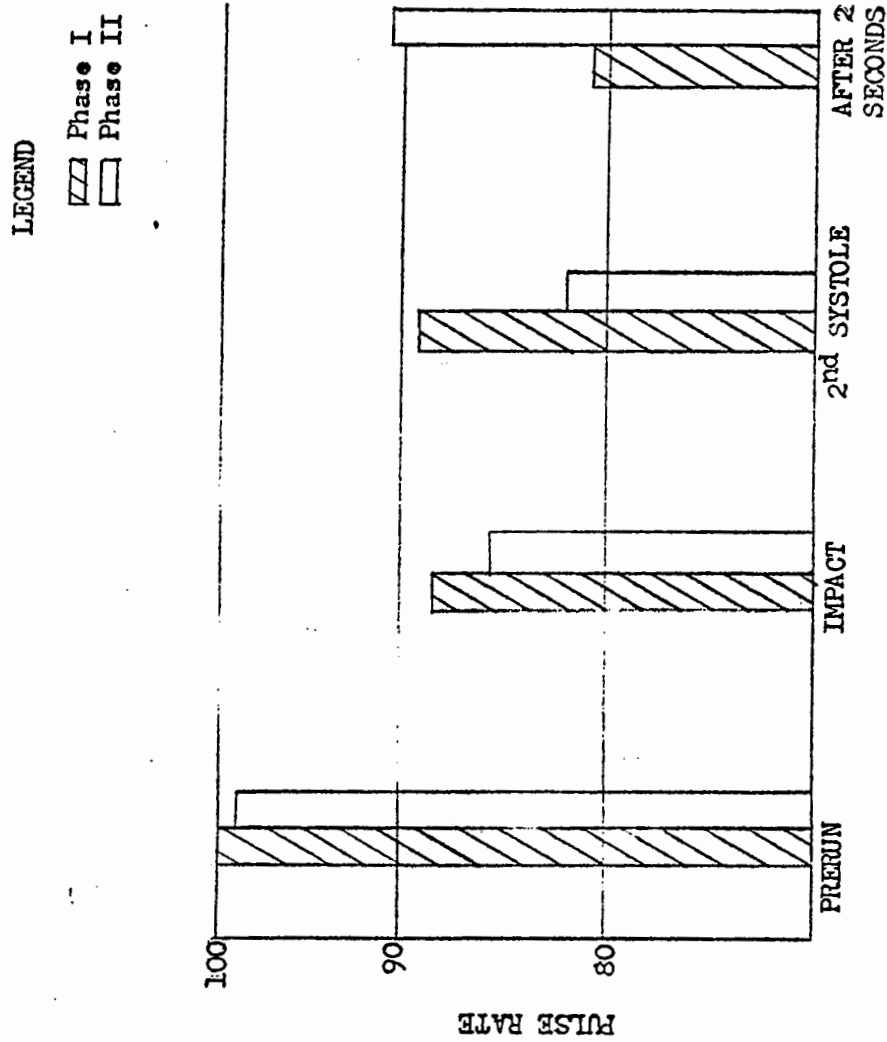
- MEASURED DISPLACEMENTS
1. VERTEBRAL DISPLACEMENT HEADWARD
 - (A) MID-THORACIC BODY - 2.8 CM
 - (B) MID-LUMBAR BODY - 1.0 CM
 - (C) LATERAL DISPLACEMENT - RIGHT
 - (D) MID-THORAX - 0.8 CM
 - (E) PELVIS - 0.2 CM
 2. DIAPHRAGMS - 6.0 CM HEADWARD
 3. *CARDIAC SHADOW - 6.0 CM HEADWARD
 4. COLON - 1.0 CM HEADWARD
- AND CM OF THE CARDIAC SHADOW

STATIC AND DYNAMIC ROENTGENOGRAMS DURING FIRING #61

PHOTO NO: CAN-351652 (L)-4-63

FIGURE 46

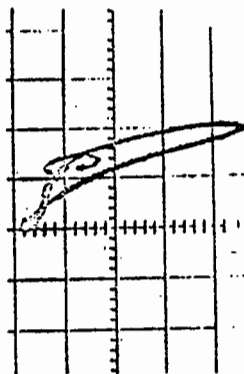




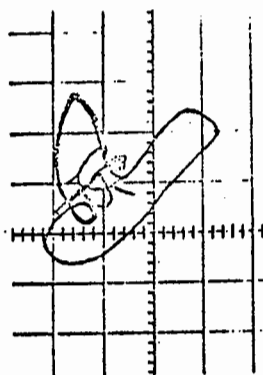
EFFECT OF IMPACT ON HEART RATE

Fig. 48

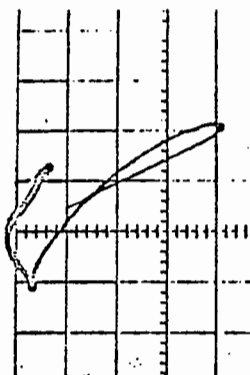
TEST 34 "B"



PRERUN

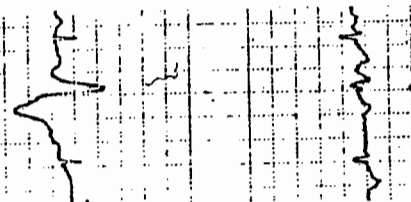


IMPACT



POSTRUN

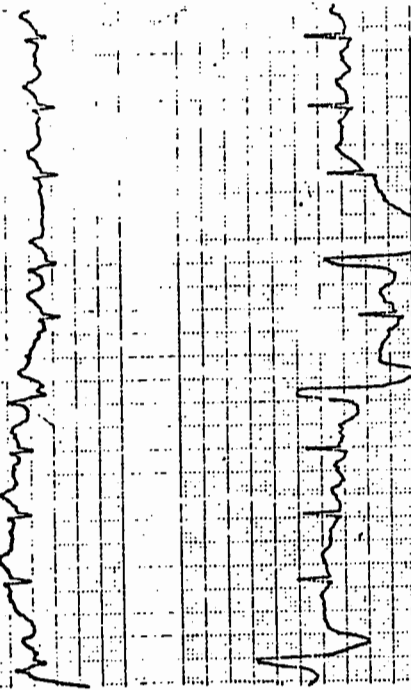
TEST 25 "E"



NOTE PVB

X-AXIS INVERTED

TEST 30 "B"



3:1 PVB'S

X-AXIS

Y-AXIS

TEST 37 "B"



SINUS BRADYCARDIA 44/44 NOTE ISOLATED PVB

EFFECT OF IMPACT ON THE ELECTROCARDIOGRAM

<p>U. S. NAVAL AIR ENGINEERING CENTER, PHILA. PA., 19112 AEROSPACE CREW EQUIPMENT LABORATORY</p> <ol style="list-style-type: none"> 1. Report NAEC-ACEL-510 2. Problem Assignment No. 005-AE-13-16 3. In DDC collection <p>DETERMINATION OF HUMAN TOLERANCE TO NEGATIVE IMPACT ACCELERATION: by Marvin Schulman, G. I. Gritz, CDR MC USN, Francis M. Highly, Jr., Dr. E. Hendler, 33 p., 7 tables, 49 figures, 28 Nov 1963.</p> <p>Presented in this report are the results of a program conducted to extend man's knowledge of short term negative acceleration as it effects humans. Subjects, fully restrained, have been exposed to increasing increments of velocity change under controlled conditions and measurements obtained of their body displacements, velocity and acceleration. The role of the restraint harness as a determinant of subjective response and tolerance to the input are also discussed.</p>	<p>U. S. NAVAL AIR ENGINEERING CENTER, PHILA. PA., 19112 AEROSPACE CREW EQUIPMENT LABORATORY</p> <ol style="list-style-type: none"> 1. Report NAEC-ACEL-510 2. Problem Assignment No. 005-AE-13-16 3. In DDC collection <p>DETERMINATION OF HUMAN TOLERANCE TO NEGATIVE IMPACT ACCELERATION: by Marvin Schulman, G. I. Gritz, CDR MC USN, Francis M. Highly, Jr., Dr. E. Hendler, 33 p., 7 tables, 49 figures, 28 Nov 1963.</p> <p>Presented in this report are the results of a program conducted to extend man's knowledge of short term negative acceleration as it effects humans. Subjects, fully restrained, have been exposed to increasing increments of velocity change under controlled conditions and measurements obtained of their body displacements, velocity and acceleration. The role of the restraint harness as a determinant of subjective response and tolerance to the input are also discussed.</p>
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